

Section IV. ORGANIZATIONAL TROUBLESHOOTING PROCEDURES

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4-8. GENERAL.

NOTE

Organizational Troubleshooting and Maintenance of Precision Gunnery System (PGS) components are performed by trained PGS troubleshooter or Training Audio Visual Support Center (TAVSC).

a. This section provides information for identifying and correcting malfunctions which may develop when operating or maintaining the PGS.

b. The Troubleshooting Symptom Index in paragraph 4-10 lists common malfunctions which may occur and refers you to the proper page in Table 4-1 for a troubleshooting procedure.

c. This section cannot list all malfunctions that may occur, nor all tests or inspections and corrective actions. If a malfunction is not listed, or is not corrected by the listed corrective actions, notify your supervisor.

d. A Built-In Test (BIT) is automatically and repeatedly performed when the turret power switch is placed in ON position. If a malfunction is found, a message will appear on the control panel in the form of a pop-up screen.

(1) The pop-up screen displays various types of errors.

(2) After correcting a malfunction, press ENTER or ESC on the control panel to clear the pop-up screen and resume the BIT. When all malfunctions have been corrected, the pop-up screen will no longer appear.

e. Vehicle interface unit, TBOS driver unit, RSI unit, expansion unit, TBOS video mixer, and target computer units have a malfunction indicator light which is visible through the moisture indicator window. Pay attention to these indicator lights when performing troubleshooting:

(1) If indicator light is blinking, unit is operational.

(2) If indicator light is on but NOT blinking, a malfunction is indicated.

(3) If indicator light is OFF, there is no power present.

f. When troubleshooting a malfunction:

(1) Question the operator to obtain any information that might help determine the cause of the problem. Before continuing, ensure that all applicable operator/crew troubleshooting was performed.

(2) Locate the symptom or symptoms in paragraph 4-10 that best describe the malfunction. If the appropriate symptom is not listed, notify your supervisor.

(3) Turn to page in Table 4-1 where the troubleshooting procedures for the malfunction in question are described. Headings at the top of the each page show how each troubleshooting procedure is organized: MALFUNCTION, TEST OR INSPECTION (in step number order), and CORRECTION ACTION.

(4) Perform each step in the order listed until the malfunction is corrected.

g. Off-vehicle test procedures for the PGS are found in paragraph 4-40.

4-9. EXPLANATION OF COLUMNS.

The columns in Table 4-1 are defined as follows:

- a. **MALFUNCTION.** A visual or operational indication that something is wrong with the PGS.
 - b. **TEST OR INSPECTION.** A procedure to isolate the problem in a system or component.
 - c. **CORRECTIVE ACTION.** A procedure to correct the problem.
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4-10. TROUBLESHOOTING SYMPTOM INDEX.

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“ERROR HULL D. DETECTOR UNIT L/F”	4-35
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“ERROR HULL D. DETECTOR UNIT R/F”	4-33
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4-10. TROUBLESHOOTING SYMPTOM INDEX (CON'T).

	Troubleshooting Procedure Page
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"NO CONNECTION CABLE J2 EXP. UNIT"	4-23
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"NO CONNECTION RETRO DETECTOR UNIT L/R"	4-22
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"NO CONNECTION RETRO DETECTOR UNIT R/R"	4-20
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"NO CONNECTION TBOS EYEPIECE UNIT GUNNER"	4-18
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Table 4-1. Organizational Troubleshooting.

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
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1. SYSTEM WILL NOT FIRE.**NOTE**

Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.

- Step 1. Replace shorting plug (see paragraph 4-25).
- Step 1. Replace W14 cable (see paragraph 4-39).
- Step 1. Replace expansion unit (see paragraph 4-19).
- Step 1. Replace vehicle interface unit (see paragraph 4-20).
- Step 1. Notify Contractor Logistic Support (CLS).

1. VEHICLE INTERCOM DOES NOT PROVIDE AUDIO INDICATIONS WHEN FIRING.**NOTE**

Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.

- Step 1. Replace W13 cable (see paragraph 4-38).
- Step 1. Replace expansion unit (see paragraph 4-19).
- Step 1. Notify CLS.

1. GUNNER'S 25 MM GUN OR COAX TRACERS FALLING SHORT AND/OR TARGET HIT POSITION INCORRECT.**WARNING**

Vehicle MASTER SWITCH and turret power must be OFF before connecting or disconnecting system components/cables. Failure to follow this warning may cause turret or 25 mm gun movement, resulting in injury or death to personnel.

NOTE

Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.

- Step 1. Replace TBOS gunner's eyepiece unit (see paragraph 4-15).
- Step 1. Replace W9 cable (see paragraph 4-34).
- Step 1. Replace TBOS driver unit (see paragraph 4-18).

Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
		Step 1. Check W14 cables for damage. Replace W14 cable, if damaged (see paragraph 4-39).
		Step 1. Check W4, W5, and W6 cables for damage. Replace W4, W5, or W6 cable if damaged (see paragraph 4-29, 4-30, or 4-31).
		Step 1. Replace expansion unit (see paragraph 4-19).
		Step 1. Replace vehicle interface unit (see paragraph 4-20).
		Step 1. Notify CLS.
1. COMMANDER'S 25 MM GUN OR COAX TRACERS FALLING SHORT AND/OR TARGET HIT POSITION INCORRECT.		

WARNING

Vehicle MASTER SWITCH and turret power must be OFF before connecting or disconnecting system components/cables. Failure to follow this warning may cause turret or 25 mm gun movement, resulting in injury or death to personnel.

NOTE

Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.

- Step 1. Replace TBOS commander's eyepiece unit (see paragraph 4-16).
- Step 1. Replace W10 cable (see paragraph 4-35).
- Step 1. Replace TBOS driver unit (see paragraph 4-18).
- Step 1. Check W14 cables for damage.

Replace W14 cable, if damaged (see paragraph 4-39).
- Step 1. Check W4, W5, and W6 cables for damage.

Replace W4, W5, or W6 cable if damaged (see paragraph 4-29, 4-30, or 4-31).
- Step 1. Replace expansion unit (see paragraph 4-19).
- Step 1. Replace vehicle interface unit (see paragraph 4-20).
- Step 1. Notify CLS.

Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
1. CONTROL PANEL DISPLAY SCREEN SHOWS MAXIMUM RANGE FOR TARGETS WITHIN OPERATING RANGE.		
NOTE		
<p>Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.</p> <ul style="list-style-type: none"> Step 1. Replace transceiver unit (see paragraph 4-11). Step 1. Replace W14 cable (see paragraph 4-39). Step 1. Replace expansion unit (see paragraph 4-19). Step 1. Notify CLS. 		
1. CONTROL PANEL WILL NOT ACCEPT INPUT DATA AND CONTROL PANEL TEXT IS NOT DISPLAYED.		
NOTE		
<p>Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.</p> <ul style="list-style-type: none"> Step 1. Check that malfunction indicator light on vehicle interface unit is blinking. If not, check that vehicle MASTER SWITCH is ON. Step 1. Replace W12 cable (see paragraph 4-37). Step 1. Replace Training Data Retrieval System (TDRS) memory card (see paragraph 4-24). Step 1. Replace control panel (see paragraph 4-24). 		
NOTE		
<p>Perform steps 5 through 16 only if control panel text still does not appear on control panel display screen.</p> <ul style="list-style-type: none"> Step 1. Replace vehicle interface unit (see paragraph 4-20). 		
<div style="border: 1px solid black; padding: 2px; display: inline-block;"> WARNING </div>		
<p>Vehicle MASTER SWITCH and turret power must be OFF before connecting or disconnecting system components/cables. Failure to follow this warning may cause turret or 25 mm gun movement, resulting in injury or death to personnel.</p> <ul style="list-style-type: none"> Step 1. Disconnect W5 cable from vehicle interface unit connector J2 (see paragraph 4-30). Step 1. Replace W1 cable (see paragraph 4-26). 		

Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
		Step 1. Replace W2 cable (see paragraph 4-27).
		Step 1. Replace W3 cable (see paragraph 4-28).
		Step 1. Replace W4 cable (see paragraph 4-29).
		Step 1. Replace W5 cable (see paragraph 4-30).
		Step 1. Replace TBOS driver unit (see paragraph 4-18).
		Step 1. Replace target computer unit (see paragraph 4-23).
		Step 1. Replace TBOS video mixer (see paragraph 4-22).
		Step 1. Replace remote system interface unit (see paragraph 4-21).
		Step 1. Replace transceiver unit (see paragraph 4-11).

NOTE

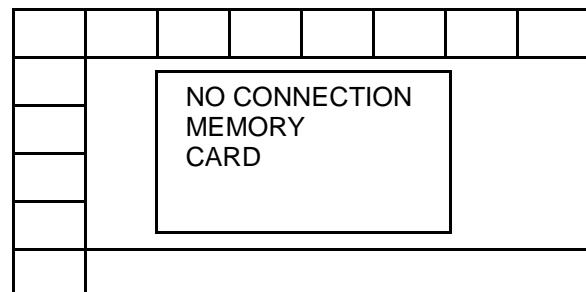
Perform steps 17 through 19 only if control panel text still does not appear on control panel display screen.

- Step 1. Replace W14 cable (see paragraph 4-39).
- Step 1. Replace expansion unit (see paragraph 4-19).
- Step 1. Notify CLS.

1. **CONTROL PANEL WILL NOT ACCEPT SELECTION OF SYSTEM FUNCTIONS AND DISPLAY SCREEN SHOWS "NO CONNECTION MEMORY CARD".**

NOTE

Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving the vehicle.



- Step 1. Replace TDRS memory card (see paragraph 4-24).
- Step 1. Replace control panel (see paragraph 4-24).
- Step 1. Notify CLS.

Table 4-1. Organizational Troubleshooting (Con't).

Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION																								
1. CONTROL PANEL DISPLAY SCREEN SHOWS "INCORRECT VEHICLE TYPE ON TDRS MEM CARD".	NOTE Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving the vehicle.	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td colspan="7">INCORRECT VEHICLE TYPE ON TDRS MEM. CARD</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										INCORRECT VEHICLE TYPE ON TDRS MEM. CARD														
	INCORRECT VEHICLE TYPE ON TDRS MEM. CARD																									
1. CONTROL PANEL DISPLAY SCREEN SHOWS "NO CONNECTION TRANSCEIVER UNIT".	NOTE Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving the vehicle.	<table border="1"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td colspan="7">NO CONNECTION TRANSCEIVER UNIT</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										NO CONNECTION TRANSCEIVER UNIT														
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Step 1. Replace W1 cable (see paragraph 4-26).
Step 1. Replace W2 cable (see paragraph 4-27).
Step 1. Replace W3 cable (see paragraph 4-28).
Step 1. Replace W4 cable (see paragraph 4-29).
Step 1. Replace W5 cable (see paragraph 4-30).
Step 1. Replace transceiver unit (see paragraph 4-11).
Step 1. Notify CLS.

Table 4-1. Organizational Troubleshooting (Con't).

Vehicle MASTER SWITCH and turret power must be OFF before connecting or disconnecting system components/cables. Failure to follow this warning may cause turret or 25 mm gun movement, resulting in injury or death to personnel.

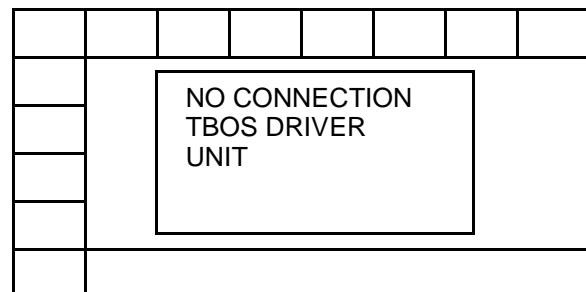
- Step 1. Disconnect W8 cable from target computer unit (see paragraph 4-33).

Step 1. Perform manual BIT (see paragraph 2-6).

Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
NOTE		
Perform steps 10 through 14 only if “NO CONNECTION TARGET COMPUTER UNIT” message no longer appears on control panel display screen.		
Step 1. Replace W8 cable (see paragraph 4-33). Step 1. Replace right-rear retro detector unit (see paragraph 4-14). Step 1. Replace left-rear retro detector unit (see paragraph 4-14). Step 1. Replace right-rear hull defilade detector unit (see paragraph 4-14). Step 1. Replace left-rear hull defilade detector unit (see paragraph 4-14). Step 1. Replace W1 cable (see paragraph 4-26). Step 1. Replace W2 cable (see paragraph 4-27). Step 1. Replace W3 cable (see paragraph 4-28). Step 1. Replace W4 cable (see paragraph 4-29). Step 1. Replace W5 cable (see paragraph 4-30). Step 1. Replace target computer unit (see paragraph 4-23). Step 1. Notify CLS.		

**1. CONTROL PANEL DISPLAY SCREEN SHOWS
“NO CONNECTION TBOS DRIVER UNIT”.**

**NOTE**

Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.

- Step 1. Replace W1 cable (see paragraph 4-26).
- Step 1. Replace W2 cable (see paragraph 4-27).
- Step 1. Replace W3 cable (see paragraph 4-28).
- Step 1. Replace W4 cable (see paragraph 4-29).
- Step 1. Replace W5 cable (see paragraph 4-30).
- Step 1. Replace W9 cable (see paragraph 4-34).
- Step 1. Replace W10 cable (see paragraph 4-35).

Table 4-1. Organizational Troubleshooting (Con't).

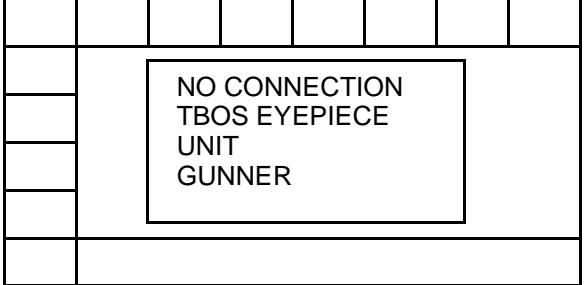
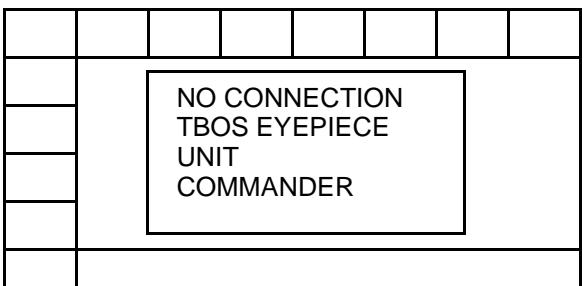
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
		Step 1. Replace TBOS driver unit (see paragraph 4-18).
		Step 1. Replace TBOS gunner's eyepiece unit (see paragraph 4-15).
		Step 1. Replace TBOS commander's eyepiece unit (see paragraph 4-16).
		Step 1. Notify CLS.
1. CONTROL PANEL DISPLAY SCREEN SHOWS “NO CONNECTION TBOS EYEPIECE UNIT GUNNER”.		
	NOTE	
Manual BIT and alignment proce- dures must be performed after each corrective action (see paragraphs 2- 6 and 2-7). Ensure that PGS is func- tioning properly before leaving vehicle.		 A graphic of a control panel display with a 4x7 grid of small squares. In the center, there is a larger rectangular box containing the text "NO CONNECTION TBOS EYEPIECE UNIT GUNNER".
		Step 1. Replace W9 cable (see paragraph 4-34).
		Step 1. Replace TBOS gunner's eyepiece unit (see paragraph 4-15).
		Step 1. Replace TBOS driver unit (see paragraph 4-18).
		Step 1. Notify CLS.
1. CONTROL PANEL DISPLAY SCREEN SHOWS “NO CONNECTION TBOS EYEPIECE UNIT COMMANDER”.		
	NOTE	
Manual BIT and alignment proce- dures must be performed after each corrective action (see paragraphs 2- 6 and 2-7). Ensure that PGS is func- tioning properly before leaving vehicle.		 A graphic of a control panel display with a 4x7 grid of small squares. In the center, there is a larger rectangular box containing the text "NO CONNECTION TBOS EYEPIECE UNIT COMMANDER".
		Step 1. Replace W10 cable (see paragraph 4-35).
		Step 1. Replace TBOS commander's eyepiece unit (see paragraph 4-16).
		Step 1. Replace TBOS driver unit (see paragraph 4-18).
		Step 1. Notify CLS.

Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION																								
1. CONTROL PANEL DISPLAY SCREEN SHOWS "NO CONNECTION RETRO DETECTOR UNIT R/F".	NOTE Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.	<table border="1" style="width: 100%; height: 100px;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td colspan="7" style="text-align: center;">NO CONNECTION RETRO DETECTOR UNIT R/F</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										NO CONNECTION RETRO DETECTOR UNIT R/F														
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1. CONTROL PANEL DISPLAY SCREEN SHOWS "NO CONNECTION HULL D. DETECTOR UNIT R/F".	NOTE Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.	<table border="1" style="width: 100%; height: 100px;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td colspan="7" style="text-align: center;">NO CONNECTION HULL D. DETECTOR UNIT R/F</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										NO CONNECTION HULL D. DETECTOR UNIT R/F														
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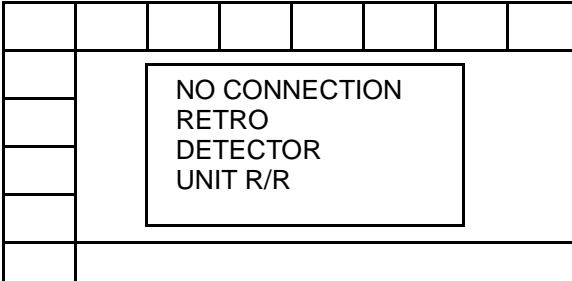
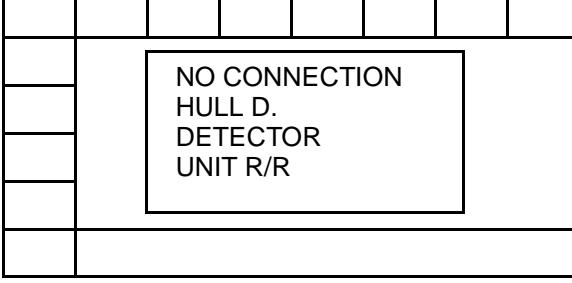
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Step 1. Replace right-rear hull defilade detector unit (see paragraph 4-14).																									
Step 1. Replace target computer unit (see paragraph 4-23).																									
Step 1. Notify CLS.																									
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Step 1. Notify CLS.																									

Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION																								
1. CONTROL PANEL DISPLAY SCREEN SHOWS "NO CONNECTION RETRO DETECTOR UNIT L/F".	NOTE Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td colspan="7" style="text-align: center;">NO CONNECTION RETRO DETECTOR UNIT L/F</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										NO CONNECTION RETRO DETECTOR UNIT L/F														
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	Step 1. Replace left-front retro detector unit (see paragraph 4-12). Step 1. Replace W7 cable (see paragraph 4-32). Step 1. Replace left-front hull defilade detector unit (see paragraph 4-12). Step 1. Replace target computer unit (see paragraph 4-23). Step 1. Notify CLS.																									
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Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION																								
1. CONTROL PANEL DISPLAY SCREEN SHOWS "NO CONNECTION RETRO DETECTOR UNIT L/R".	NOTE Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td colspan="7" style="text-align: center;">NO CONNECTION RETRO DETECTOR UNIT L/R</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										NO CONNECTION RETRO DETECTOR UNIT L/R														
	NO CONNECTION RETRO DETECTOR UNIT L/R																									
	Step 1. Replace left-rear retro detector unit (see paragraph 4-14). Step 1. Replace W8 cable (see paragraph 4-33). Step 1. Replace left-rear hull defilade detector unit (see paragraph 4-14). Step 1. Replace target computer unit (see paragraph 4-23). Step 1. Notify CLS.																									
1. CONTROL PANEL DISPLAY SCREEN SHOWS "NO CONNECTION HULL D. DETECTOR UNIT L/R".	NOTE Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td colspan="7" style="text-align: center;">NO CONNECTION HULL D. DETECTOR UNIT L/R</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										NO CONNECTION HULL D. DETECTOR UNIT L/R														
	NO CONNECTION HULL D. DETECTOR UNIT L/R																									
	Step 1. Replace left-rear hull defilade detector unit (see paragraph 4-14). Step 1. Replace left-rear retro detector unit (see paragraph 4-14). Step 1. Replace W8 cable (see paragraph 4-33). Step 1. Replace target computer unit (see paragraph 4-23). Step 1. Notify CLS.																									

Table 4-1. Organizational Troubleshooting (Con't).

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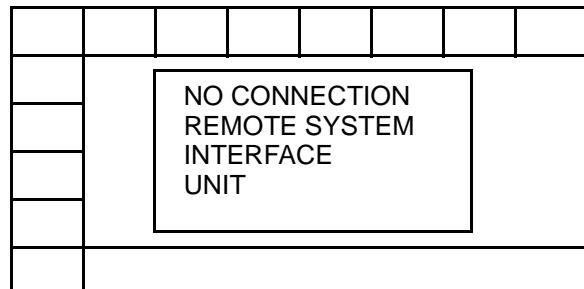
MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
		Step 1. Replace W2 cable (see paragraph 4-27).
		Step 1. Replace W3 cable (see paragraph 4-28).
		Step 1. Replace W4 cable (see paragraph 4-29).
		Step 1. Replace W5 cable (see paragraph 4-30).
		Step 1. Replace TBOS driver unit (see paragraph 4-18).
		Step 1. Replace remote system interface unit (see paragraph 4-21).
		Step 1. Replace target computer unit (see paragraph 4-23).
		Step 1. Replace TBOS video mixer (see paragraph 4-22).
		Step 1. Replace transceiver unit (see paragraph 4-11).
		Step 1. Replace vehicle interface unit (see paragraph 4-20).
		Step 1. Notify CLS.
1. CONTROL PANEL DISPLAY SCREEN SHOWS “NO CONNECTION REMOTE SYSTEM INTERFACE UNIT”.		
	NOTE	
	Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.	
		Step 1. Replace W1 cable (see paragraph 4-26).
		Step 1. Replace W2 cable (see paragraph 4-27).
		Step 1. Replace W3 cable (see paragraph 4-28).
		Step 1. Replace W4 cable (see paragraph 4-29).
		Step 1. Replace W5 cable (see paragraph 4-30).
		Step 1. Replace RSI unit (see paragraph 4-21).
		Step 1. Notify CLS.

Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION																								
1. CONTROL PANEL DISPLAY SCREEN SHOWS "NO CONNECTION TBOS VIDEO MIXER UNIT".	<p style="text-align: center;">WARNING</p> <p>Vehicle MASTER SWITCH and turret power must be OFF before connecting or disconnect system components/cables. Failure to follow this warning may cause turret or 25 mm gun movement, resulting in injury or death to personnel.</p>	<table border="1" style="width: 100%; height: 100%;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td colspan="7" style="text-align: center;">NO CONNECTION TBOS VIDEO MIXER UNIT</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										NO CONNECTION TBOS VIDEO MIXER UNIT														
	NO CONNECTION TBOS VIDEO MIXER UNIT																									

NOTE

Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.

- Step 1. Replace W1 cable (see paragraph 4-26).
- Step 1. Replace W2 cable (see paragraph 4-27).
- Step 1. Replace W3 cable (see paragraph 4-28).
- Step 1. Replace W4 cable (see paragraph 4-29).
- Step 1. Replace W5 cable (see paragraph 4-30).
- Step 1. Replace W11 cable (see paragraph 4-36).
- Step 1. Replace TBOS video mixer (see paragraph 4-22).
- Step 1. Notify CLS.

Table 4-1. Organizational Troubleshooting (Con't).

Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	
TEST OR INSPECTION	
CORRECTIVE ACTION	
1. CONTROL PANEL DISPLAY SCREEN SHOWS "ERROR CONTROL PANEL".	
NOTE	
Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.	
<p>Step 1. Replace TDRS memory card (see paragraph 4-24).</p> <p>Step 1. Replace control panel (see paragraph 4-24).</p> <p>Step 1. Replace vehicle interface unit (see paragraph 4-20).</p> <p>Step 1. Notify CLS.</p>	
1. CONTROL PANEL DISPLAY SCREEN SHOWS "ERROR MEMORY CARD".	
NOTE	
Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.	
<p>Step 1. Replace TDRS memory card (see paragraph 4-24).</p> <p>Step 1. Replace control panel (see paragraph 4-24).</p> <p>Step 1. Notify CLS.</p>	

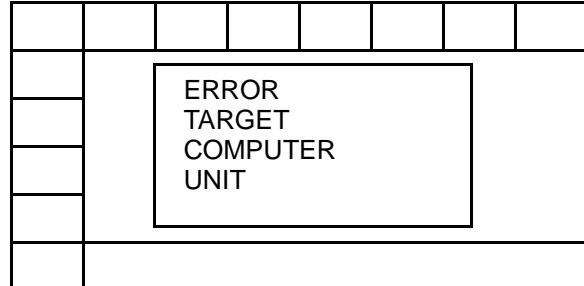
Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
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1. CONTROL PANEL DISPLAY SCREEN SHOWS
“ERROR TARGET COMPUTER UNIT”.



Vehicle **MASTER SWITCH** and turret power must be OFF before connecting or disconnecting system components/cables. Failure to follow this warning may cause turret or 25 mm gun movement, resulting in injury or death to personnel.

**NOTE**

Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.

- Step 1. Disconnect W7 cable from target computer unit (see paragraph 4-32).
- Step 1. Perform manual BIT (see paragraph 2-6).

NOTE

Perform steps 3 through 7 only if “ERROR TARGET COMPUTER UNIT” message no longer appears on control panel display screen.

- Step 1. Replace W7 cable (see paragraph 4-32).
- Step 1. Replace right-front retro detector unit (see paragraph 4-12).
- Step 1. Replace left-front retro detector unit (see paragraph 4-12).
- Step 1. Replace right-front hull defilade detector unit (see paragraph 4-12).
- Step 1. Replace left-front hull defilade detector unit (see paragraph 4-12).



Vehicle **MASTER SWITCH** and turret power must be OFF before connecting or disconnecting system components/cables. Failure to follow this warning may cause turret or 25 mm gun movement, resulting in injury or death to personnel.

- Step 1. Disconnect W8 cable from target computer unit (see paragraph 4-33).
- Step 1. Perform manual BIT (see paragraph 2-6).

Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION	NOTE																								
			Perform steps 10 through 14 only if “ERROR TARGET COMPUTER UNIT” message no longer appears on control panel display screen.																								
		Step 1. Replace W8 cable (see paragraph 4-33).																									
		Step 1. Replace right-rear retro detector unit (see paragraph 4-14).																									
		Step 1. Replace left-rear retro detector unit (see paragraph 4-14).																									
		Step 1. Replace right-rear hull defilade detector unit (see paragraph 4-14).																									
		Step 1. Replace left-rear hull defilade detector unit (see paragraph 4-14).																									
		Step 1. Replace target computer unit (see paragraph 4-23).																									
		Step 1. Replace W1 cable (see paragraph 4-26).																									
		Step 1. Replace W2 cable (see paragraph 4-27).																									
		Step 1. Replace W3 cable (see paragraph 4-28).																									
		Step 1. Replace W4 cable (see paragraph 4-29).																									
		Step 1. Replace W5 cable (see paragraph 4-30).																									
		Step 1. Notify CLS.																									
1. CONTROL PANEL DISPLAY SCREEN SHOWS “ERROR TARGET COMPUTER OR TDRS MEM. CARD”.			<table border="1" style="width: 100%; height: 100%;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td colspan="7" style="text-align: center;">ERROR TARGET COMPUTER OR TDRS MEM. CARD</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										ERROR TARGET COMPUTER OR TDRS MEM. CARD														
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		NOTE																									
		Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.																									
		Step 1. Replace TDRS memory card (see paragraph 4-24).																									
		Step 1. Replace control panel (see paragraph 4-24).																									
		Step 1. Replace target computer unit (see paragraph 4-23).																									
		Step 1. Notify CLS.																									

Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION																																
1. CONTROL PANEL DISPLAY SCREEN SHOWS "ERROR TBOS DRIVER UNIT".	NOTE Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td colspan="7" style="text-align: center;">ERROR TBOS DRIVER UNIT</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										ERROR TBOS DRIVER UNIT																						
	ERROR TBOS DRIVER UNIT																																	
	Step 1. Replace W9 cable (see paragraph 4-34). Step 1. Replace W10 cable (see paragraph 4-35). Step 1. Replace TBOS driver unit (see paragraph 4-18). Step 1. Replace TBOS gunner's eyepiece unit (see paragraph 4-15). Step 1. Replace TBOS commander's eyepiece unit (see paragraph 4-16). Step 1. Replace W1 cable (see paragraph 4-26). Step 1. Replace W2 cable (see paragraph 4-27). Step 1. Replace W3 cable (see paragraph 4-28). Step 1. Replace W4 cable (see paragraph 4-29). Step 1. Replace W5 cable (see paragraph 4-30). Step 1. Notify CLS.	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td colspan="7" style="text-align: center;">ERROR TRANSCEIVER UNIT</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										ERROR TRANSCEIVER UNIT																						
	ERROR TRANSCEIVER UNIT																																	

Table 4-1. Organizational Troubleshooting (Con't).

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MALFUNCTION																									
TEST OR INSPECTION																									
CORRECTIVE ACTION																									
1. CONTROL PANEL DISPLAY SCREEN SHOWS "ERROR HULL D. DETECTOR UNIT R/R".	<table border="1" style="width: 100%; height: 100%;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td colspan="7" style="text-align: center;">ERROR HULL D. DETECTOR UNIT R/R</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										ERROR HULL D. DETECTOR UNIT R/R														
	ERROR HULL D. DETECTOR UNIT R/R																								
<p>NOTE</p> <p>Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.</p>																									
<p>Step 1. Replace right-rear hull defilade detector unit (see paragraph 4-14).</p> <p>Step 1. Replace right-rear retro detector unit (see paragraph 4-14).</p> <p>Step 1. Replace W8 cable (see paragraph 4-33).</p> <p>Step 1. Replace target computer unit (see paragraph 4-23).</p> <p>Step 1. Notify CLS.</p>																									
1. CONTROL PANEL DISPLAY SCREEN SHOWS "ERROR RETRO DETECTOR UNIT L/F".	<table border="1" style="width: 100%; height: 100%;"> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td></td><td colspan="7" style="text-align: center;">ERROR RETRO DETECTOR UNIT L/F</td></tr> <tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										ERROR RETRO DETECTOR UNIT L/F														
	ERROR RETRO DETECTOR UNIT L/F																								
<p>NOTE</p> <p>Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle.</p>																									
<p>Step 1. Replace left-front retro detector unit (see paragraph 4-12).</p> <p>Step 1. Replace W7 cable (see paragraph 4-32).</p> <p>Step 1. Replace left-front hull defilade detector unit (see paragraph 4-12).</p> <p>Step 1. Replace target computer unit (see paragraph 4-23).</p> <p>Step 1. Notify CLS.</p>																									

Table 4-1. Organizational Troubleshooting (Con't).

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Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
		Step 1. Replace W13 cable (see paragraph 4-38).
		Step 1. Replace W14 cable (see paragraph 4-39).
		Step 1. Replace expansion unit (see paragraph 4-19).

WARNING

Vehicle MASTER SWITCH and turret power must be OFF before connecting or disconnecting system components/cables. Failure to follow this warning may cause turret or 25 mm gun movement, resulting in injury or death to personnel.

Step 1. Disconnect W5 cable from vehicle interface unit connector J2 (see paragraph 4-30).

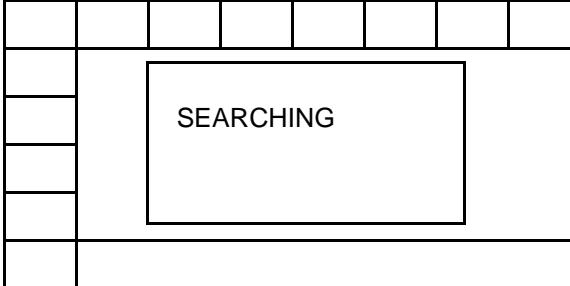
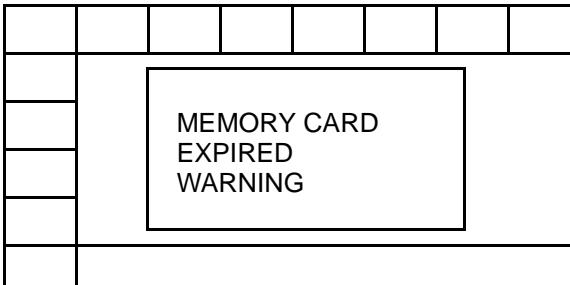
NOTE

Perform steps 7 through 18 only if “ERROR VEHICLE INTERFACE UNIT” message no longer appears on control panel display screen.

- Step 1. Replace W1 cable (see paragraph 4-26).
- Step 1. Replace W2 cable (see paragraph 4-27).
- Step 1. Replace W3 cable (see paragraph 4-28).
- Step 1. Replace W4 cable (see paragraph 4-29).
- Step 1. Replace W5 cable (see paragraph 4-30).
- Step 1. Replace TBOS driver unit (see paragraph 4-18).
- Step 1. Replace target computer unit (see paragraph 4-23).
- Step 1. Replace remote system interface unit (see paragraph 4-21).
- Step 1. Replace video mixer unit (see paragraph 4-22).
- Step 1. Replace transceiver unit (see paragraph 4-11).
- Step 1. Replace vehicle interface unit (see paragraph 4-20).
- Step 1. Notify CLS.

Table 4-1. Organizational Troubleshooting (Con't).

Table 4-1. Organizational Troubleshooting (Con't).

MALFUNCTION	TEST OR INSPECTION	CORRECTIVE ACTION
		Step 1. Replace W4 cable (see paragraph 4-29).
		Step 1. Replace W5 cable (see paragraph 4-30).
		Step 1. Replace W11 cable (see paragraph 4-36).
		Step 1. Replace TBOS video mixer (see paragraph 4-22).
		Step 1. Notify CLS.
1. CONTROL PANEL DISPLAY SCREEN INDICATES “SEARCHING”.	NOTE	 <p>The diagram shows a rectangular display screen with the word "SEARCHING" centered in a large white box. Above the screen, there is a horizontal row of seven smaller boxes, each containing a vertical line, representing a header or menu bar. Below the screen, there is a larger box representing the main content area.</p>
		<ul style="list-style-type: none"> • Manual BIT and alignment procedures must be performed after each corrective action (see paragraphs 2-6 and 2-7). Ensure that PGS is functioning properly before leaving vehicle. • “SEARCHING” is not a pop-up screen.
		Step 1. Replace RSI unit (see paragraph 4-21).
		Step 1. Replace RSI antenna (see paragraph 4-13).
		Step 1. Notify CLS.
1. CONTROL PANEL DISPLAY SCREEN INDICATES “MEMORY CARD EXPIRED WARNING”.	NOTE	 <p>The diagram shows a rectangular display screen with the text "MEMORY CARD EXPIRED WARNING" centered in a large white box. Above the screen, there is a horizontal row of seven smaller boxes, each containing a vertical line, representing a header or menu bar. Below the screen, there is a larger box representing the main content area.</p>
		<p>This malfunction indicates that the memory card is full.</p>

Either download TDRS memory card to TDRS computer unit and reprogram card or insert a new TDRS memory card.

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